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**(54) MANUFACTURE OF  
SEMICONDUCTOR DEVICE**

(57) Abstract:

PURPOSE: To provide a method of manufacturing a silicon film including boron which ensures excellent step-portion covering characteristic and is just suitable for

manufacturing process under a low temperature condition.

CONSTITUTION: An amorphous Si film is deposited by the pressure-reduced CVD method under a low temperature of 200 or higher and 400°C or lower using any one of disilane ( $Si_2H_6$ ) or trisilane ( $Si_3H_6$ ) and diborane ( $B_2H_6$ ). Thereby, a Si film including boron which ensures excellent step-portion covering characteristic can be formed. Using the obtained Si film as a diffusion source, extremely shallow junction may be formed.

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